

IN THE CLAIMS:

Please amend Claim 17 and add Claims 20 to 24 as follows. A listing of the claims and their status, together with the text of the pending claims is provided below.

- SubDI
1. (Previously Amended) A method for negotiating an exchange of image processing functionality between first and second devices over a bi-directional communication link, comprising the steps of:
- communicating a function description between the first and second devices, the function description including information concerning functionality available in the first or second devices;
 - negotiating an assignment of image processing functionality between the first and second devices, with the overall image processing functionality effecting an image transfer between the first and second devices; and
 - transferring program code that implements image processing functionality between the first and second devices in a case where the negotiated assignment indicates that functionality in one of the first and second devices is needed by the other of the first and second devices, wherein the program code is executed by the other of the devices.
2. (Original) A method according to Claim 1, further comprising the step of transferring image data from the first device to the second device using the negotiated assignment of functionality, including functionality that has been exported from one device to the other.

3. (Original) A method according to Claim 1, wherein said step of negotiating an assignment of functionality includes the steps of:

determining alternative processing sequences for image data transfer;
applying a cost function to each alternative; and
selecting the alternative with the lowest cost function.

4. (Original) A method according to Claim 3, wherein said cost function contemplates both image transfer time and image quality.

5. (Original) A method according to Claim 1, further comprising the step of obtaining function code descriptions for functionality in a repository of image processing functionality, wherein said step of negotiating to assign functionality includes the step of negotiating in respect of the image processing functionality exported from the repository, and wherein said step of transferring functionality includes the step of transferring functionality from the repository.

6. Cancelled.

7. (Original) A method according to Claim 1, wherein said first and second devices retain transferred functionality for use in connection with subsequent image processing jobs.

8. (Previously Amended) A network interface card for interfacing between an image processing device and a local area network, said network interface card including:

a network protocol stack for interfacing between the local area network and the network interface card, and for receiving network communications directed to the image processing device;

C
1
a device-specific application layer that provides device-specific image processing functionality for driving the image processing device, the device-specific application layer receiving network communications directed to the device from the protocol stack; and

a negotiation controller for negotiating an exchange of image processing functionality with another device on the local area network, the negotiation controller being programmed with process steps according to the method of any one of Claims 1 to 7.

9. (Original) Computer-executable process steps stored on a computer readable storage medium, the computer executable process steps for negotiating an exchange of image processing functionality between first and second devices over a bi-directional communication link, said computer executable process steps including steps according to any of Claims 1 to 7.

10. (Original) A storage medium for storing computer executable process steps to effect negotiation of an exchange of image processing functionality

between first and second devices over a bi-directional communication link, said process steps including steps according to any of Claims 1 to 7.

11. (Previously Amended) A network interface card for interfacing between a network and an image processing apparatus, the network interface card comprising:

C
1
a communicator adapted to communicate a function description with an external device, the function description including information concerning functionality available in the image processing apparatus or the external device;

a negotiator adapted to negotiate an assignment of image processing functionality between the image processing apparatus and the external device; and

an exporter adapted to transfer program code that implements image processing functionality to the external device for execution thereon in a case that the negotiated assignment of image processing functionality indicates that functionality is needed by the external device.

12. Cancelled.

13. Cancelled.

14. (Previously Amended) An image processing apparatus comprising:

a communicator adapted to communicate function descriptions with the external device, the function descriptions including information concerning image processing functionality available in the image processing apparatus or the external device;

a negotiator adapted to negotiate an assignment of image processing functionality between the image processing apparatus and the external device; and

an exporter adapted to transfer program code that implements image processing functionality to the external device for execution thereon in a case that the negotiated assignment of image processing functionality indicates that functionality is needed by the external device.

15. (Previously Added) An image processing apparatus according to Claim 14, further comprising an image data transmitter adapted to transmit image data to the external device based on the negotiated assignment of functionality.

16. (Previously Added) An image processing apparatus according to Claim 14, further comprising a receiver adapted to receive program code that implements image processing functionality from the external device in case that the negotiation indicates that functionality is needed in the image processing apparatus.

17. (Currently Amended) A method according to Claim 1, wherein said step of communicating includes the steps of:

transferring the function description from one of the ~~of the~~ first and second devices to the other of the first and second devices; and

transferring the function description from the other of the first and second devices to the one of the first and second devices.

18. (Previously Added) A network interface card for interfacing between a network and image processing apparatus, the network interface card comprising:

a communicator adapted to communicate a function description with an external device, the function description including information concerning functionality available in the image processing apparatus or the external device; and

a negotiator adapted to negotiate an assignment of image processing functionality between the image processing apparatus and the external device; and

a receiver adapted to receive program code that implements image processing functionality from the external device for execution on the image processing apparatus in a case that the negotiated assignment of image processing functionality indicates that functionality is needed by the image processing apparatus.

19. (Previously Added) An image processing apparatus comprising:

a communicator adapted to communicate a function description with an external device, the function description including information concerning functionality available in the image processing apparatus or the external device; and

a negotiator adapted to negotiate an assignment of image processing functionality between the image processing apparatus and the external device; and

a receiver adapted to receive program code that implements image processing functionality from the external device for execution on the image processing

apparatus in a case that the negotiated assignment of image processing functionality indicates that functionality is needed by the image processing apparatus.

20. (New) A method according to Claim 1, wherein negotiating an assignment of image processing functionality is based on a cost analysis, which is based at least in part on a cost of transferring the program code that implements image processing functionality between the first and second devices.

21. (New) A network interface card according to Claim 11, wherein the negotiator is adapted to negotiate an assignment of image processing functionality based on a cost analysis, which is based at least in part on a cost of transferring the program code that implements image processing functionality to the external device.

22. (New) An image processing apparatus according to Claim 14, wherein the negotiator is adapted to negotiate an assignment of image processing functionality based on a cost analysis, which is based at least in part on a cost of transferring the program code that implements image processing functionality to the external device.

23. (New) A network interface card according to Claim 18, wherein the negotiator is adapted to negotiate an assignment of image processing functionality based on a cost analysis, which is based at least in part on a cost of transferring the program code that implements image processing functionality to from external device.

c
1

24. (New) An image processing apparatus according to Claim 19,
wherein the negotiator is adapted to negotiate an assignment of image processing
functionality based on a cost analysis, which is based at least in part on a cost of
transferring the program code that implements image processing functionality from the
external device.